

**Preface**

In compliance with the Federal Communication Commission's (FCC) Rules and Regulations and the 2001 TRP Order, ALLTEL Telephone System (ATS), herein adjusts rates for issuing carrier's contained in its Interstate Access Service Tariff F.C.C. No. 1.<sup>1</sup> The proposed rates are for the period July 1, 2002 through June 30, 2002. Information provided to support this filing is contained in the following volumes:

**Volume 1-1      Description and Justification**

The Description and Justification provides a detailed review of the methods, procedures and assumptions that were used to produce the proposed rates.

**Volume 1-2      Tariff Review Plan**

The Tariff Review Plan provides Commission defined display of cost, demand, rates, earnings and revenue information associated with this filing.

**Volume 2          47 CFR § 61.38 - Cost Study Work Papers**

Part 69 cost study work papers provide a showing of interstate revenue requirement detail used in rate development to produce interstate rates.

**Volume 3          47 CFR § 61.38 - Special Study, Individual Case Basis (ICB) and Settlement Information**

Special study results provide the information used to develop ALLTEL's: non-recurring, optional feature and function, and additional labor and engineering charges. ICB work papers provide cost support for DS3 service which is priced on a customer specific arrangement. Also, one ALLTEL company is involved in a single bill settlement arrangement and those settlements are used to adjustment revenue requirement.

**Volume 4          47 CFR § 61.38 - Demand Forecast Work Papers**

Demand forecast work papers provide a showing of the development of forecasted interstate demand quantities. This includes the historical demand, forecasting methods and relevant statistical information, where appropriate.

**Volume 5          47 CFR § 61.38 - Rate Development Work Papers**

This volume provides detailed work papers showing the development of interstate rates proposed in this filing.

**Section 1          Introduction and Overview**

- 1.1      Introduction
- 1.2      Issuing Carrier Status
- 1.3      FCC Rule Conformance
- 1.4      Demand Methodology

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<sup>1</sup>      47 CFR § 69.3 and *In the Matter of Material to be Filed in Support of 2002 Annual Access Tariff Filings*, DA 01-1105, released 4/27/01 (2001 TRP Order).

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**1.1 Introduction**

In this filing, ALLTEL Telephone System (ATS) proposes to adjust tariff rates for issuing carriers contained in ATS, Interstate Tariff F.C.C. No. 1, for the period July 1, 2001 through June 30, 2002 (test year).<sup>2</sup> ALLTEL study areas are making this filing under the Commission's rules for rate of return carriers.

The Description and Justification (D&J) for this filing is contained in the following pages of Volume 1-1. Volume 1-2 through 5 are provided as supporting work papers to the rate changes proposed in this filing.

The D&J is comprised of 5 sections. Section 1 is an introduction and overview of the 2001 annual access tariff filing. Section 2 is a review of the methods, procedures and assumptions that were used in preparing forecasted interstate revenue requirements for the test year. Section 3 provides the special studies results used in the development of non-recurring (NRC), optional feature and function (OFF), and additional labor and engineering

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<sup>2</sup> The term issuing carrier is used interchangeably throughout the D&J with the term study area.

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charges and to produce the relative index studies used in special access rate development. Section 3 also describes the development of Individual Case Basis (ICB) rates and special service arrangements for issuing carriers contained in the ATS Tariff. ALLTEL's 2001-02 demand assumptions and forecast process are described in Section 4. Section 5 contains ALLTEL's rate development methodology.

**1.2 Issuing Carrier Status**

Each issuing carrier in ATS FCC No. 1, with the exception of ALLTEL Georgia Communications Corporation and Georgia ALLTEL Telecom, Inc. will continue to reference NECA FCC No. 5 for carrier common line access service. All other interstate access service regulations, rates and charges will be provided out of ATS FCC No. 1. End user and traffic sensitive access rates will be developed and filed at a study area level for all study areas except the following:

ALLTEL New York properties: ALLTEL New York, Inc. - Fulton, ALLTEL New York, Inc. - Jamestown, and ALLTEL New York, Inc. - Red Jacket will file composite traffic sensitive access rates and end user rates.

Oklahoma properties: Oklahoma ALLTEL, Inc. and ALLTEL Oklahoma, Inc. will file composite traffic sensitive and end user access rates.

Georgia properties: ALLTEL Georgia, Inc., ALLTEL Georgia Communications Corporation and Georgia ALLTEL Telecom, Inc. will file composite traffic sensitive and end user access rates. ALLTEL Georgia Communications Corporations and Georgia ALLTEL Telecom, Inc. will file composite carrier common line access rates.

Composite rates are based on aggregated study area revenue requirement and demand forecasts for the test year.

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### 1.3 FCC Rule Conformance

This filing conforms with all relevant Commission Orders affecting the provision of access service.<sup>3</sup> The rates contained in this filing conform to 47 C.F.R. Parts 32, 36, 64, 65 and 69. All transitional aspects of Part 36 and Part 69 rules have been reflected in the test year revenue requirements and rate development.

### 1.4 Demand Methodology

As a result of ALLTEL filing multiple company switched and special access rates, a systematic approach to demand forecasting was used in the present filing to determine test year demand. ALLTEL utilized econometric forecasting techniques to develop switched access and special access demand forecasts. Other "stock items" were forecasted based on a thorough analysis of historical demand trends and current billing. A more detailed description of the demand forecasting methodology follows in Section 4 of this Volume.

### 1.5 Annual Access Tariff Filing Waivers

In addition to the company specific waivers contained in the order, ALLTEL utilized the following industry-wide waivers granted by the Commission:<sup>4</sup>

1. Maintain the special access surcharge rate of \$25.00,
2. Establish and maintain an information surcharge rate element.
3. Establish a monthly end user charge for the recovery of universal service contributions.

### 1.6 Local Transport Restructure

In this filing, ALLTEL revises the local transport restructure rates for the test year. These revisions incorporate ALLTEL's prospective switched transport revenue requirements and special access rates as the basis for establishing the Entrance Facility, Direct Trunked Transport, Tandem Switched Transport, Tandem Switching and the Residual Interconnection charges. More information on Local Transport rate development is contained in Section 5 of this volume.

### 1.7 Access Service Arrangements

Service arrangements offered under ATS Tariff FCC No. 1 are for both switched and special access. Switched access service arrangements are provided by feature group and are distinguished by standard operational capabilities. Special access service arrangements are provided for private line facilities inclusive of the closed

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<sup>3</sup> See, for example, *Access Billing Requirements for Joint Service Provision*, CC Docket No. 87-579, 4 FCC Rcd 7183 (1989) (Meet Point Billing Order); 2001 TRP Order, *Access Charge Reform*, CC Docket No. 96-262, First Report and Order, FCC 97-158 (May 16, 1999).

<sup>4</sup> See: *Annual 1989 Access Tariff Filings*, DA 88-1872, Memorandum Opinion and Order, released 12/2/88 (1989 Waiver Order), *In the Matter of Waiver of Sections 69.3(a) and 69.3(d) of the Commission's Rules*, DA 01-1429, released June 14, 2001.

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end WATS/800. Further detail for both switched and special access service can be found in ATS Tariff FCC No. 1, Sections 6 and 7, respectively. In addition, ALLTEL end office and meet point data required for ordering and billing access services are contained in NECA Tariff FCC No. 4.

## 2 Development of Test Year and Past Year Cost of Service

### 2.1 Introduction and Assumptions

This volume describes the development of forecasted access revenue requirements within the carrier common line, traffic sensitive switched and special access categories. These forecasts were performed to provide the necessary information for rate development as well as furnish the data required by the Commission's Tariff Review Plan (TRP). Revenue requirements forecasts for the test year were developed using the following assumptions:

- 1) The test year for this comprehensive filing is July 1, 2001 through June 30, 2002 as prescribed in the 2001 TRP Order.
- 2) The past year cost of service (PYCOS) period supporting this filing is January through December 2000, in accordance with the 2001 TRP Order.
- 3) Current 47 C.F.R. Part 32 Accounting Standards, Part 36 Separations Rules, and Part 69 Access Charge Rules are reflected.
- 4) Regulated and non-regulated costs are apportioned in compliance with FCC Part 64 Cost Allocation Rules.<sup>5</sup>
- 5) The definition of rate base is determined in accordance with the Rate Base Order which amended Part 65 of the Commission's rules.<sup>6</sup>
- 6) Revenue requirements are calculated to achieve the currently authorized 11.25% rate of return on Rate Base.
- 7) The apportionment of central office equipment (COE) category 3 for the test year is based on the study area DEM factors as prescribed in Part 36.125.
- 8) Other post retirements employee benefits are incorporated based upon Financial Accounting Standards Board (FASB) #106.
- 9) Remote COE is projected based upon RAO Letter 21.<sup>7</sup>
- 10) Other billing & collection (OB&C) expenses are projected based upon the Commission's OB&C Order.<sup>8</sup>
- 11) The revenue requirement data reflect the expense/capital threshold prescribed in the

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<sup>5</sup> *Separation of Costs of Regulated Telephone Service from Costs of Non-regulated Activities*, CC Docket No. 86-111, Report and Order, 2 FCC Rcd 1298 (1987), released 2/6/87 (Cost Allocation Manual Order).

<sup>6</sup> *Rate Base Order*, CC Docket No. 86-497, Report and Order, 2 FCC Rcd 269 (1987)

<sup>7</sup> *Classification of Remote Central Office Equipment for Accounting Purposes*, DA 92-1225, Common Carrier Bureau, Responsible Accounting Officer (RAO) Letter 21, released 9/8/92, (RAO Letter 21).

<sup>8</sup> *Petition for Declaratory ruling Pertaining to Interstate Common Line Allocation of Other Billing and Collection Expenses Under Part 36 and 69 of the Commission's Rules*, Common Carrier Services, Memorandum Opinion and Order, released 12/16/92, (OB&C Order).

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\$500 Expense Limit Order.<sup>9</sup>

- 12) The federal income tax rate for the test year is calculated at the currently prescribed corporate tax rate of 35 percent.

**2.2 2001-02 Projected Financial Data**

ALLTEL issuing carriers utilized the ALLTEL budgeting process as the basis for projecting test year revenue requirements. ALLTEL's budgeting process requires the preparation of a five year business plan, prepared each year, for the five subsequent calendar year periods. The five year business plan is submitted to the ALLTEL Board of Directors for approval.

Because the test year is comprised of information pertaining to two calendar years, additional analysis is required to arrive at the test year forecasts. With the five year business plan as a starting point, capital improvements and operating expenses are trended for 2001 and 2002, with beginning and end points then determined for each calendar year. Data from the two (2) calendar years is then aggregated to produce the test year forecasts. Provided below is an overview of ALLTEL's supplemental analysis used to arrive at test year financial forecasts:

- 1) Forecasts for the calendar years 2001 and 2002 for each ALLTEL study area were prepared. Budgets were prepared at the study area level by operating company personnel and by staff from telephone service corporation.
- 2) Data was established using seasonal trends obtained from actual historical annual patterns. Capital expenditures were based on approved budgets. The half year convention was employed for the introduction of anticipated COE and C&WF additions and the associated expenses.
- 3) Capital and operating expense activity for the test year was reviewed and adjusted to reflect expenditures for the proper year of introduction.

This analysis represents each study areas best estimate of future costs. The test year forecast takes into account known or expected changes in the business operations, state regulatory changes, growth and modernization, and expected policy and financial changes. Estimates of investment, operating expense and varying levels of service demand are analyzed to produce a comprehensive budget view. When combined with financial performance objectives, operating results are created.

ALLTEL's 2001 and 2002 budgets utilize Part 32 Accounting Rules. Non-regulated costs, in accordance with Part 64 of the Commission's Rules, are removed. The resultant regulated costs, subject to separations, are jurisdictionally allocated in accordance with Part 36 rules. Access elements are derived in accordance with Part 69 rules.

**2.3 Cost of Service Study Development****1) Past Year Cost of Services**

Data supporting financial results were utilized as the starting data for the 2000 PYCOS study. Financial statements were reviewed and careful consideration given to segregate regulated and non-regulated investment and expenses.

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<sup>9</sup> *Revisions of the Uniform System of Accounts for Telecommunications Companies*, CC Docket No. 87-135, , Common Carrier Services, , Report and Order, 3 FCC Rcd 6701 (1988), released 7/22/88, (\$500 Expense Limit Order).

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These statements were analyzed and regulated baseline data was utilized for jurisdictional separation based upon Part 36 of the Commission's Rules. Access elements were further developed based upon Part 69 of the Commission's Rules. Volume 2, Section 3, contains the results of the PYCOS studies for each study area. A summary of study area PYCOS data is also available in the TRP, Volume 1-2.

2) July 1, 2001 through June 30, 2002 Forecasted Cost of Service

As previously discussed, data supporting the July 1, 2001 through June 30, 2002 period was forecasted for the test year. These statements were analyzed and regulated baseline data was utilized for jurisdictional separation based upon Part 36 of the Commission's Rules. Access elements were further developed based upon Part 69 of the Commission's Rules. Volume 2, Section 2, contains the results of the test year studies for each study area. A summary of study area test year data is also available in the TRP, Volume 1-2.

**2.4 Analysis of Significant Changes**

1) Special Access

Western Reserve Telephone Co. had increases in Wideband and private line loops which increased TS-SA revenue requirement. Wideband loop ratio increased from 45% to 51%. ALLTEL Pennsylvania's special access revenue requirement increased 40% due to an increases in ADSL, Wideband and private line circuits. Georgia Communications' special access revenue requirement increased by 47% due to ADSL investment as well as an increase of \$2.6 million in expenses.

2) Switched Access

ALLTEL allocated a \$10.9 million severance expense among all operating companies. ALLTEL Carolina (NC) revenue requirement (CL, Switched and Special) increased by 22% due to increases in rate base of 54.26 million (GSF \$1.86M, COE \$8.5M, CWF \$37.5M, Misc \$6.4M) and increase expenses of \$1.35 million in COE and \$4.56 million in CWF. Georgia Communications' Switched revenue requirement increase was due to an increase of \$7.8 million in COE investment.

3) Carrier Common Line

Georgia ALLTEL Telecom, Inc. and ALLTEL Georgia Communication Corp. have decreases in their CCL revenue requirements because universal service contributions are no longer recovered through common line charges.<sup>10</sup>

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<sup>10</sup> *In the matter of Waiver of Sections 69.3(a) and 69.4(d) of the Commission's Rules*, DA 01-1429, released June 14, 2001.

**Description and Justification****3. Special Studies, Individual Case Basis Services and Single Bill Settlements****3.1 Special Studies**

The study results for the studies listed below are displayed in Volume 3 of this filing.

- A) Access Service Provisioning NRC Study
- B) Access Service Ordering NRC Study
- C) Optional Features and Functions Study
- D) Loaded Labor Rate Study
- E) Capitalized Loading Factor Study

The Access Service Order and Provisioning NRC studies, Loaded Labor Rate study and Capitalized Loading Factor study were not reissued and completed for incorporation in the 2001 Annual Access Tariff filing. These studies were last issued and completed for the 1999 Annual Access Tariff filing. The summarized results of these studies are displayed in Volume 3 of this filing.

**3.2 Special Access Service Indices**

ALLTEL utilizes special access service indices to separate special access revenue requirements into subelement detail. Special access service indices are developed for each issuing carrier based on the corresponding rate relationships evident in the adjoining regional Bell operating company territory. The indices reflect the embedded relationship of monthly special access rates (Channel Termination, Channel Mileage Termination and Channel Mileage Facility) to the corresponding two-wire voice grade Channel Termination rate. These relationships are applicable for all special access service types including DS3 where currently offered under general tariff offerings. Where necessary, the special access indices were adjusted to account for variation in the rate structure between the ALLTEL and regional Bell operating company interstate tariff and/or conform the embedded service relationships to the prescribed rate relationships set forth in the Commission's Special Access Pricing Order.<sup>11</sup> The indices and associated issuing carriers are identified by group and provided in Volume 3 of this description and justification. More information on special access rate development is provided in Section 5 of this volume.

**3.3 ICB Services**

ALLTEL currently provides certain service arrangements under Individual Case Basis (ICB) rates where the customer has requested: (1) unique service arrangements not currently offered in the tariff, (2) service arrangements that an ATS issuing carrier has had no previous demand or experience in provisioning, or (3) services and specialized equipment over and above the standard equipment used by the telephone company in

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<sup>11</sup>Investigation of Special Access Tariffs of Local Exchange Carriers, CC Docket No. 85-166, Phase II, Part 1, Memorandum Opinion and Order, released December 1, 1988 (Special Access Order).



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provisioning a generally tariffed service pursuant to the required technical specifications referenced in the tariff.

For the current test year ALLTEL has forecasted the continuation of two existing arrangements. The arrangements in existence as of this filing are:

ALLTEL Carolina, Inc.'s provision of alternate routing to Sara Lee Corporation.

ALLTEL Carolina, Inc.'s provision of optical DS1 service to Westinghouse Incorporated.

The revenues associated with these arrangements are displayed on Volume 3, Page 9.

**3.4 Single Bill Settlement**

ALLTEL Georgia Communications Corporation, BellSouth, Nelson-Balground Telephone, Ellijay Telephone and Blue Ridge Telephone have entered into a single bill, single tariff arrangement for switched access transport and special access service for the fiber optic self healing ring installed in Northwest Georgia. Under this arrangement, each company bills the access customer 100% of the transport between its own end office and the access customer's serving wire center (SWC) at each company's own tariffed rates. Since this is a self healing fiber optic ring, traffic may traverse the network from end office(s) to SWC(s) in a clockwise or counter clockwise direction, but not consistently one way or the other. As a result, the companies agreed to a single bill, single tariff application for the ring arrangement with monthly settlement dollars flowing to and from each company to compensate for the transport that normally would be billed by each company under a multiple bill, multiple tariff meet point billing arrangement. The monthly settlement dollars were calculated by pricing out sampled demand units (minutes for switched access and circuits for special access) for each company. The demand units were then multiplied by each company's specific rate and the agreed upon ring meet point billing percent. Finally the sampled demand from each company's end office(s) was multiplied by that company's specific rate for 100% of the transport. The difference between what the end office company bills at 100% transport using their specific rates and the pay out that the end office company owes to each ring participant is the net settlement amount. The settlement numbers used to adjust the revenue requirement are displayed in Volume 3, Page 10.

**Description and Justification****4. Development of Test Period Demand****4.1 Introduction**

This section describes the methodologies used to develop prospective access demand quantities for the switched, special access and end user categories. Traffic sensitive - switched minutes of use (MOU), special access and end user demand forecasts were developed for the following study areas:

1. ALLTEL Carolina, Inc.
2. ALLTEL Florida
3. ALLTEL Georgia Communications Corp
4. Georgia ALLTEL Telecom, Inc.
5. ALLTEL Kentucky
6. ALLTEL New York, Inc. - Red Jacket
7. ALLTEL New York, Inc. - Fulton
8. ALLTEL New York, Inc - Jamestown
9. Oklahoma ALLTEL, Inc.
10. ALLTEL Pennsylvania
11. Sugar Land Telephone
12. ALLTEL Georgia
13. ALLTEL Mississippi
14. ALLTEL Missouri
15. ALLTEL Oklahoma
16. ALLTEL South Carolina
17. Western Reserve Telephone
18. ALLTEL Alabama
19. Texas ALLTEL
20. ALLTEL Arkansas
21. ALLTEL Ohio - End User Demand Only

In addition, common line MOU forecasts were developed for ALLTEL Georgia Communications Corp. and Georgia ALLTEL Telecom, Inc..

**4.2 Estimating ALLTEL Demand**

ALLTEL uses historical data from its Carrier Access Billing System (CABS) to forecast access demand. As

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CABS was designed primarily for billing purposes, historical data is maintained with an emphasis on billing efficiency rather than date sensitivity. As a result, the month in which the service usage was billed may differ from the month it was incurred, causing distortions in the historical base.

Billing problems, which occurred over the course of several months were often corrected using an algorithm, which allocates billed usage to the appropriate time frame. Nevertheless, the correction process is imperfect, and the minutes of use (MOU) data series still fluctuates significantly, as can be seen in the attached Volume 4, Section 2. These fluctuations dictate the choice of statistical methodologies used in forecasting MOU.

### 4.3 Forecast Methodology

An extensive data series analysis was performed for the 2001 filing and is described in detail in the Description and Justification, Section 4 for year 2001 filing. The previous year analysis consisted of employing a univariate time series analysis to forecast each series. A univariate time series model describes the behavior of a variable using only a function of past values of the variable and a disturbance, as shown in equation 1:

$$X_t = F(X_{t-1}, X_{t-2}, \dots, u)$$

Where appropriate, the dependent variable was modeled using each of the following methods: Holt-Winters smoothing, Box-Jenkins ARIMA, autoregressive conditional heteroskedasticity (ARCH), and generalized autoregressive conditional heteroskedasticity (GARCH). In almost all cases the method which provided the best forecast according to objective econometric measures was a Holt-Winters exponential smoothing method containing a multiplicative seasonal term. This is the reason that all of the forecasts for the year 2001 filing were obtained using the Holt-Winters exponential smoothing.

#### The Holt-Winters Method

The Holt-Winters method is a simple to apply, albeit powerful generalized exponential smoothing procedure. This method is generally considered appropriate for forecasting series with a time trend. The Holt-Winters method allows the user specify whether the model should account for seasonal variation. In each instance, we followed the standard procedure of estimating the mean, trend, and seasonality smoothing parameters used in the Holt-Winters forecast.

#### ALLTEL Alabama

##### 1. Access Lines and MOU

Data for the number of access lines and MOU for ALLTEL Alabama was available for the period between January 1994 and December 2000. The exponential smoothing technique Holt-Winters containing a multiplicative seasonal term was used to obtain both MOU and access line forecasts. Forecast results for the fiscal year 2001 (July to June) are shown in Volume 4 Section 2.

#### ALLTEL Arkansas

##### 1. Access Lines and MOU

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Data for the number of access lines and MOU for ALLTEL Arkansas was available for the period between January 1994 and December 2000. The exponential smoothing technique Holt-Winters containing a multiplicative seasonal term was used to obtain both MOU and access line forecasts. Forecast results for the fiscal year 2001 (July to June) are shown in Volume 4 Section 2.

ALLTEL Florida1. Access Lines and MOU

Data for the number of access lines and MOU for ALLTEL Florida was available for the period between January 1994 and December 2000. The exponential smoothing technique Holt-Winters containing a multiplicative seasonal term was used to obtain both MOU and access line forecasts. Forecast results for the fiscal year 2001 (July to June) are shown in Volume 4 Section 2.  
statistical inference do not hold.

ALLTEL New York, Inc. - Fulton1. Access Lines and MOU

Data for the number of access lines and MOU for ALLTEL New York - Fulton was available for the period between January 1994 and December 2000. The exponential smoothing technique Holt-Winters containing a multiplicative seasonal term was used to obtain both MOU and access line forecasts. Forecast results for the fiscal year 2001 (July to June) are shown in Volume 4 Section 2.

ALLTEL Georgia

## 1. Access Lines and MOU

Data for the number of access lines and MOU for ALLTEL Georgia was available for the period between January 1994 and December 2000. The exponential smoothing technique Holt-Winters containing a multiplicative seasonal term was used to obtain both MOU and access line forecasts. Forecast results for the fiscal year 2001 (July to June) are shown in Volume 4 Section 2.

ALLTEL Georgia Communications Corp.1. Access Lines and MOU

Data for the number of access lines and MOU for ALLTEL Georgia Communications Corp., was available for the period between January 1994 and December 2000. The exponential smoothing technique Holt-Winters containing a multiplicative seasonal term was used to obtain both MOU and access line forecasts. Forecast results for the fiscal year 2001 (July to June) are shown in Volume 4 Section 2.

Georgia ALLTEL Telecom, Inc.1. Access Lines and MOU

Data for the number of access lines and MOU for Georgia ALLTEL Telecom, Inc. was available for the period between January 1994 and December 2000. The exponential smoothing technique Holt-Winters containing a

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multiplicative seasonal term was used to obtain both MOU and access line forecasts. Forecast results for the fiscal year 2001 (July to June) are shown in Volume 4 Section 2.

ALLTEL New York, Inc - Jamestown1. Access Lines and MOU

Data for the number of access lines and MOU for ALLTEL New York - Jamestown, Inc. was available for the period between January 1994 and December 2000. The exponential smoothing technique Holt-Winters containing a multiplicative seasonal term was used to obtain both MOU and access line forecasts. Forecast results for the fiscal year 2001 (July to June) are shown in Volume 4 Section 2.

ALLTEL Kentucky1. Access Lines and MOU

Data for the number of access lines and MOU for ALLTEL Kentucky was available for the period between January 1994 and December 2000. The exponential smoothing technique Holt-Winters containing a multiplicative seasonal term was used to obtain both MOU and access line forecasts. Forecast results for the fiscal year 2001 (July to June) are shown in Volume 4 Section 2.

ALLTEL Missouri1. Access Lines and MOU

Data for the number of access lines and MOU for ALLTEL Missouri was available for the period between January 1994 and December 2000. The exponential smoothing technique Holt-Winters containing a multiplicative seasonal term was used to obtain both MOU and access line forecasts. Forecast results for the fiscal year 2001 (July to June) are shown in Volume 4 Section 2.

ALLTEL Mississippi1. Access Lines and MOU

Data for the number of access lines and MOU for ALLTEL Mississippi was available for the period between January 1994 and December 2000. The exponential smoothing technique Holt-Winters containing a multiplicative seasonal term was used to obtain both MOU and access line forecasts. Forecast results for the fiscal year 2001 (July to June) are shown in Volume 4 Section 2.

ALLTEL Ohio1. Access Lines and MOU

Data for the number of access lines and MOU for ALLTEL Ohio was available for the period between January 1994 and December 2000. The exponential smoothing technique Holt-Winters containing a multiplicative seasonal term was used to obtain both MOU and access line forecasts. Forecast results for the fiscal year 2001 (July to June) are shown in Volume 4 Section 2.

ALLTEL Carolina, Inc.

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1. Access Lines and MOU

Data for the number of access lines and MOU for ALLTEL Carolina was available for the period between January 1994 and December 2000. The exponential smoothing technique Holt-Winters containing a multiplicative seasonal term was used to obtain both MOU and access line forecasts. Forecast results for the fiscal year 2001 (July to June) are shown in Volume 4 Section 2.

**Description and Justification**ALLTEL Oklahoma1. Access Lines and MOU

Data for the number of access lines and MOU for ALLTEL Oklahoma was available for the period between January 1994 and December 2000. The exponential smoothing technique Holt-Winters containing a multiplicative seasonal term was used to obtain both MOU and access line forecasts. Forecast results for the fiscal year 2001 (July to June) are shown in Volume 4 Section 2.

Oklahoma ALLTEL1. Access Lines and MOU

Data for the number of access lines and MOU for Oklahoma ALLTEL was available for the period between January 1994 and December 2000. The exponential smoothing technique Holt-Winters containing a multiplicative seasonal term was used to obtain both MOU and access line forecasts. Forecast results for the fiscal year 2001 (July to June) are shown in Volume 4 Section 2.

ALLTEL Pennsylvania1. Access Lines and MOU

Data for the number of access lines and MOU for ALLTEL Pennsylvania was available for the period between January 1994 and December 2000. The exponential smoothing technique Holt-Winters containing a multiplicative seasonal term was used to obtain both MOU and access line forecasts. Forecast results for the fiscal year 2001 (July to June) are shown in Volume 4 Section 2.

ALLTEL New York, Inc. - Red Jacket1. Access Lines and MOU

Data for the number of access lines and MOU for ALLTEL New York, Inc. - Red Jacket was available for the period between January 1994 and December 2000. The exponential smoothing technique Holt-Winters containing a multiplicative seasonal term was used to obtain both MOU and access line forecasts. Forecast results for the fiscal year 2001 (July to June) are shown in Volume 4 Section 2.

ALLTEL South Carolina1. Access Lines and MOU

Data for the number of access lines and MOU for ALLTEL South Carolina was available for the period between January 1994 and December 2000. The exponential smoothing technique Holt-Winters containing a multiplicative seasonal term was used to obtain both MOU and access line forecasts. Forecast results for the fiscal year 2001 (July to June) are shown in Volume 4 Section 2.

Sugar Land Telephone Company1. Access Lines and MOU

Data for the number of access lines and MOU for Sugar Land Telephone Company was available for the period between January 1994 and December 2000. The exponential smoothing technique Holt-Winters containing a

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multiplicative seasonal term was used to obtain both MOU and access line forecasts. Forecast results for the fiscal year 2001 (July to June) are shown in Volume 4 Section 2.

Texas ALLTEL1. Access Lines and MOU

Data for the number of access lines and MOU for Texas ALLTEL was available for the period between January 1994 and December 2000. The exponential smoothing technique Holt-Winters containing a multiplicative seasonal term was used to obtain both MOU and access line forecasts. Forecast results for the fiscal year 2001 (July to June) are shown in Volume 4 Section 2.

Western Reserve1. Access Lines and MOU

Data for the number of access lines and MOU for ALLTEL Alabama was available for the period between January 1994 and December 2000. The exponential smoothing technique Holt-Winters containing a multiplicative seasonal term was used to obtain both MOU and access line forecasts. Forecast results for the fiscal year 2001 (July to June) are shown in Volume 4 Section 2.

**4.4 Special Access and Dedicated Switched Access Circuits**

As a general rule, there were not enough observations to conduct reliable forecasts using Box-Jenkins ARIMA or ARCH models. Therefore, where there was enough data to do so, special access and dedicated switched access circuits were forecasted using Holt-Winters methods. In several cases, there were not enough observations even to conduct Holt-Winters forecasts, in which case we merely took an average of existing observations or used our judgement to determine if there was an actual trend. Additionally, in a few instances there were severe outliers among the observations that could be reliably attributed to billing errors; where appropriate in such cases, we averaged out the outliers prior to applying the Holt-Winters method.



**Description and Justification****5.1 Introduction**

This section describes the end user and traffic sensitive rate development processes used by ALLTEL in this filing. For rate making purposes, Volume 2, Section 1 displays the test year revenue requirement and Volume 4 displays the test year demand quantities.

**5.2 End User and Common Line Rate Development**

- 1) End user and common line rate development can be found in Volume 5, Page 2.
- 2) End User Universal Service Charge can be found in Attachment EU-USF.

**5.2.1 End User Rate Development**

End user charges for the ALLTEL study areas were calculated by the following method:

- 1) Subtract revenues associated with test year special access surchargeable channels from the BFP revenue requirement.
- 2) Divide "adjusted" BFP revenue requirement by the test year access lines to obtain annual multi-line rate.
- 3) Divide annual multi-line rate by 12 to obtain monthly multi-line rate.
- 4) Compare monthly multi-line rate to the Commission's capped rate of \$6.00 and file the smaller of the two.

End user test year demand is displayed in Volume 4, Section 2. BFP revenue requirement is displayed in Volume 2, Section 1. End user rate development is displayed in Volume 5, Page 2.

**5.2.2 Common Line Rate Development**

Common line rates for ALLTEL were calculated as follows:

- 1) Single line and multi-line end user rates were priced out to obtain annual revenues from end user charges.
- 2) From the total common line revenue requirement the carrier common line (CCL) rate making revenue requirement is obtained by adding universal support fund payments, and subtracting special access surcharge (SAS) revenues and end user revenues.
- 3) Chargeable originating and terminating CCL MOUs are developed (premium MOUs + 45% non-premium MOUs equals chargeable MOUs).
- 4) Dividing the CCL rate making revenue requirement (in 2 above) by the chargeable originating MOUs (in 3 above) yields a composite originating CCL rate.
- 5) Since the composite originating CCL rate is above \$0.01, the capped rate of \$0.01 is used.

**Description and Justification**

- 6) Originating CCL MOUs are priced out at the originating CCL rate (\$0.01) and the originating revenues are subtracted from the rate making revenue requirement (in 2 above).

## Description and Justification

- 7) The terminating CCL rate equals the CCL rate making revenue requirement (in 2 above) less originating CCL revenues (in 6 above) divided by the chargeable terminating MOUs.

The CCL revenue requirement is displayed in Volume 2, Section 1. CCL rate development is displayed in Volume 5, Page 2.

### 5.3 Switched Access Rate Development

Switched access is composed of the following access elements: local switching, information surcharge and transport.

#### 5.3.1 Local Switching

The switched access local switching rate element is designed to recover costs associated with Category 3, COE investment and expenses and SS7 signaling costs as mandated in FCC 97-158. There are two (2) premium local switching categories, LS-2 and LS-1. The LS-2 rate applies to FGC and FGD local switching minutes. The LS-1 rate applies to FGA and FGB local switching minutes where equal access is available. The proposed LS-2 and LS-1 rate was calculated by dividing the test year local switching revenue requirement plus SS7 revenue requirement, less the dial equipment weighting amount that will be recovered through the USF fund, by the test year chargeable minutes (premium minutes plus 45% of the non-premium minutes). The non-premium LS rate was calculated by multiplying the LS-2 rate by 45%. The non-premium LS rate applies to FGA and FGB in non-equal access offices.

Local switching rate development is displayed in Volume 5, Page 4. Local switching revenue requirement is displayed in Volume 2, Section 1. Test year switching minutes are displayed in Volume 4, Section 1.

#### 5.3.2 Information Surcharge

The information surcharge rate is designed to recover the costs for directory expenses ("white pages"), Account 6622. These expenses are recovered through the information surcharge rate element which is priced per 100 access minutes. The proposed premium information surcharge rate was computed by dividing the test year information surcharge revenue requirement by the test year chargeable minutes (premium minutes plus 45% of non-premium minutes). The non-premium information surcharge rate was calculated by multiplying the premium rate by 45%.

Information surcharge rate development is displayed in Volume 5, Page 4. Information surcharge revenue requirement is displayed in Volume 2, Section 1. Test year switching minutes are displayed in Volume 4, Section 1.

#### 5.3.3 Transport

The transport rate elements are designed to recover the costs associated with providing originating or terminating switched access service between the end user's end office and the IC serving wire center. Transport rates are filed in accordance with the Commission's Transport Orders.

**Description and Justification****Direct Trunked and Entrance Facility Rate Calculation**

The term "Direct Trunked Transport" denotes switched access transport from the IC serving wire center (SWC) to the end office or from the IC SWC to the access tandem. The Direct Trunked Transport Rates are flat rate charges billed on a monthly basis where mileage exists between end offices and hubs, hubs and hubs, end office and IC SWC or tandem and IC SWC. The mileage sensitive element is Direct Trunked Facility (DTF) and is comparable to the special access rate element Channel Mileage Facility (CMF). The termination or fixed charge is Direct Trunked Termination (DTT) and is comparable to the special access rate element Channel Mileage Termination (CMT). The Switched DS1 to Voice multiplexor rate equates to the special access DS1 to Voice multiplexor rate. In developing Direct Trunked Transport rates, Voice Grade and High Capacity DS1 mileage rates were utilized.

The term "Entrance Facility" denotes a switched access service dedicated Local Transport Facility between the customer's IC SWC and the customer designated premise (i.e. Point of Presence - POP). The Entrance Facility Rates are flat rate charges billed on a monthly basis for the portion of service between the IC SWC and the customer's POP. The Entrance Facility (EF) rate is comparable to the special access Channel Termination (CT) rate element. In developing the EF rates, Voice Grade 2 Wire, Voice Grade 4 Wire and High Capacity DS1 rates were utilized.

**Rate Application**

The Direct Trunked Termination (DTT) rate applies to each end of a measured segment of transport where the customer has ordered direct trunking. The Direct Trunked Facility (DTF) rate applies to the airline miles between the measured direct trunked transport segments. If there are zero miles between end points (i.e. collocated IC SWC and End Office) neither the DTT nor DTF will apply. The Entrance Facility rate applies to the facilities between the IC SWC and IXC POP. The EF rates will apply when the IC SWC and POP are collocated. The calculation for DTT, DTF and EF rates are found in Volume 5, Page 6.

**Tandem Switching Rate Calculation**

Projected demand was used to calculate the Tandem Switching charge. To develop the Tandem Switching charge, only those minutes switched at an ALLTEL Tandem are used for rate development. Therefore, ALLTEL totaled historical minutes from offices that route through an ALLTEL tandem and developed a percent of minutes switched at the tandem. This percent was applied to the projected MOUs and the result was used as the denominator for Tandem Switching rate development. The Tandem Switching rate was calculated by dividing the adjusted rate making revenue requirement found in Volume 5, Page 5 by the total MOUs switched at the ALLTEL Tandem. Volume 4, Section 5 displays the percent of minutes tandem routed.

**Rate Application**

The Tandem Switching rate is applied per minute switched at an ALLTEL Tandem. The calculation for Tandem Switching rates are found in Volume 5, Page 5.

## Description and Justification

### Tandem Switched Transport Rates

In the Transport Orders, the Commission ordered the Tandem Switched Transport rates to be developed using high capacity rates and actual minutes per circuit per month loading factor found in Volume 4, Section 5. The term "Tandem Switched Transport" denotes switched access transport from the IC SWC to the end office or from the tandem to the end office. The two rate elements associated with Tandem Switched Transport are Tandem Switched Termination (TST) and Tandem Switched Facility (TSF). The TST rate is calculated by dividing the Direct Trunked Termination DS1 Rate by 24 (voice grade channels on a DS1) by the actual minutes of use per trunk, in accordance with FCC 97-158. The TSF rate is calculated by dividing the Direct Trunked Facility DS1 Rate by 24 (voice grade channels on a DS1) by the actual minutes of use per trunk, in accordance with FCC 97-158. Adjustments may be required, in accordance with the Access Charge Reform Order, to ensure that the revenue requirement for Host-Remote facilities is recovered 100% from TST/TSF rates and not the RIC rate. These Host-Remote adjustment computations are summarized in Volume 5, Page 5 with supporting detail found in Volume 5, Page 13.

### Rate Application

The Tandem Switched Termination (TST) rate applies per access minute at each end of a measured segment of transport switched at an end office or tandem where the customer has not ordered direct trunked transport to an end office. The Tandem Switched Facility (TSF) rate applies per access minute to the airline miles between the measured segments of transport switched at an end office or tandem where the customer has not ordered direct trunked transport to an end office. If there are zero miles between end points (i.e. collocated IC SWC and End Office) neither the TST nor TSF will apply.

Two special rate applications exist for TST and TSF. First, Host-Remote configurations will be measured in two segments, Remote to Host and Host to Tandem. The segment from the Remote to Host will incur two (2) TST charges (1 at Remote and 1 at Host) and the TSF rate will apply to the airline miles from the Remote to Host, regardless if the Host to IC SWC is ordered as Direct Trunked Transport. Second, when a Feature Group A (FGA) customer orders dial tone from an end office that is not the customer's SWC, Direct Trunked Transport will apply between the dial tone office and the SWC and Tandem Switched Transport (TST and TSF), excluding the Tandem Switching charge, will apply from the dial tone office to the end office. The calculation of Tandem Switched Transport rates are detailed in Volume 5, Page 5.

### Demand Data Required for Transport Rate Development

ALLTEL utilized current billing of dedicated trunks, entrance facilities and common transport minutes of use as the basis for rate making demand in this filing. The current billing is in accordance with the bifurcated transport change required per Commission order in FCC 97-158.

Under ALLTEL's current transport tariff, TST and DTT charges are applied at each end of a measured segment of transport. An average number of switched terminations (Terms) was calculated for each company based on the number of ALLTEL SWCs and Tandems. These Terms are used to price out the TST and DTT revenues and are found in Volume 4, Section 5.

ALLTEL recalculated the average length of haul (ALOH) for DTF and TSF for each company. This ALOH was multiplied by the total common transport minutes to determine total common transport minute-miles. ALLTEL also calculated a Remote to Host ALOH, which is based on total common transport minutes, for use in pricing the Remote only MOUs. The Remote to Host ALOH was multiplied by the total common transport minutes to determine Host-Remote common transport minute-miles. The Host-Remote common transport minute-miles was subtracted from total

**Description and Justification**

common transport minute-miles to determine minute-miles from the Host/End Office to the Tandem. The Host Remote ALOH, Total ALOH and number of Terms for the Remote-Host minutes are in Volume 4, Section 5.

Historical demand and projected demand for switched access DS1 to Voice multiplexors is zero. Therefore, Volume 4, Section 5 shows zero percent DS1 to Voice multiplexors.

**Direct Trunked Transport and Entrance Facility Revenues**

The DTT revenues were calculated by multiplying the monthly test period number of direct trunks by the Dedicated Transport Termination rates multiplied by the number of terminations. The DTF revenues were calculated by multiplying the test period number of direct trunks by the Dedicated Transport Facility rates, multiplied by the adjusted ALOH (previously described). The sum of the DTT and DTF revenues equals Dedicated Transport Revenues. These calculations are in Volume 5, Page 6.

The EF revenues were calculated by multiplying the test period number of entrance facilities by the EF Rates. These calculations are displayed in Volume 5, Page 6.

**Tandem Switched Transport Revenues**

The Tandem Switched Transport revenues were priced out in two steps. Step one priced Remote to Host Transport and step two priced minutes from End Office or Host Office to the Tandem. Combining the revenues from the two steps produces the total Tandem Switched Transport revenues (excluding Tandem Switching revenues). These calculation steps are displayed in Volume 5, Page 6.

Remote-Host Revenues

For TST revenues, the test period common transport MOUs were multiplied by the average number of remote terms per common transport MOU the multiplied by the TST rate. For TSF revenues, the common transport MOUs were multiplied by the Remote ALOH times the TSF rate. Combined, the TST and TSF revenues obtained above make up the total Remote to Host revenues.

End Office or Host to SWC Revenues

For TST revenues, common transport MOUs were multiplied by the average number of total terms per common transport MOU to derive total common transport terminations. The number of remote terminations derived above was subtracted from the total to determine the number of Terms from the End Office/Host to the Tandem. This number was multiplied by the TST rate to determine TST revenue from the End Office/Host to the Tandem. For TSF revenues, common transport MOUs were multiplied by the total ALOH per common transport MOU to derive total common transport minute-miles. The number of remote minute-miles derived above was subtracted from the total to determine the number of minute-miles from the End Office/Host to the Tandem. This number was multiplied by the TSF rate to determine TSF revenue from the End Office/Host to the Tandem. Combined, the TST and TSF make up the End Office to Tandem or Host to Tandem revenues.

**800 Database Query Revenues**

800 Database query rates proposed in this filing are designed to recover expenses associated with 800 data base access service as described in ATS F.C.C. No. 1, Section 6.10.2. 800 data base query charges will only be billed at ALLTEL offices designated in NECA F.C.C. No. 4 Wire Center Tariff as 800 series query billing locations.

**Description and Justification**

The proposed 800 database query rates are based on the interstate tariff rates of Ameritech which handles all of ALLTEL's 800 database queries.

Development of 800 data base test period query volumes is contained in Volume 4, Section 6. Development of 800 Database query revenues and is detailed in Volume 5, Page 7.

**Transport Interconnection Charge (RIC or TIC)**

In order to calculate the TIC, ALLTEL used the total transport revenue requirement from Volume 2. ALLTEL, where applicable, adjusted the total transport revenue requirement by the switched settlement arrangements discussed in Section 3 previously to obtain the adjusted transport revenue requirement. From the adjusted transport revenue requirement, the Direct Trunked Transport revenues, Entrance Facility revenues, Tandem Switched Transport revenues, adjusted rate making revenue requirement for Tandem Switching found in Volume 5, Page 5 and 800 Data Base query revenues are subtracted. The resulting dollars represent the TIC revenue requirement. The denominator is defined as total interstate local switching minutes. By adding the premium tariff period MOUs and 45% of the non-premium MOUs, chargeable MOUs are developed. Dividing the numerator (residual revenue requirement) by the denominator (chargeable MOUs) yields the premium TIC rate. The Non-premium TIC rate equals 45% of the premium rate. These calculations are found in Volume 5, Page 7.

**5.4 Special Access Rate Development**

The development of special access rates is a multi-step process designed to produce rates that reflect the hierarchical cost of service provision, fall within the prescribed rate relationships of the FCC, reflect regional market conditions spurred by new entrant competition for intraexchange special access provision and recover individual company revenue requirements.

Development of Proposed Rates

The starting point for developing proposed special access rates is the total special access revenue requirement from Volume 2 with net settlement revenues (Volume 3, Page 10) included where applicable. From this revenue requirement, the total NRC, OFF and ICB revenues are used to reduce the total special access revenue requirement in order to obtain the total special access recurring (rate making) revenue requirement which is then split between channel termination, channel mileage termination, and channel mileage facility based on ALLTEL's investment ratios for these elements. This process is displayed in Volume 5, Page 9.

The next step involves weighting forecasted special access demand with the appropriate special access service index. Where F.C.C. guidelines exist, they are used as the index. For example, a benchmark ratio of 1.6 to 1.0 exists for comparing the Voice Grade 4 Wire CT rate to the Voice Grade 2 Wire CT rate. Therefore the index for Voice Grade 4 Wire CT is 1.6. Each index is multiplied by its corresponding demand to produce a weighted demand. These calculations are displayed in Volume 5, Pages 10.

The proposed monthly rates were determined calculating a revenue requirement to weighted demand factor. This factor was applied to each special access service index to obtain the proposed recurring special access rates. This calculation is displayed in Volume 5, Page 10.